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Mineral Industry Surveys

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LEAD IN NOVEMBER 2003

Domestic mine production, based on the net quantity of lead recovered from concentrate, increased by 1% in November compared with production in October, according to the U.S. Geological Survey. Secondary refinery production decreased by 8% and reported consumption decreased by 6% in November compared with production and consumption in the previous month.

According to Platts Metals Week published quotations for November, the average North American producer price and the average London Metal Exchange (LME) cash price (U.S. dollars) increased by 0.23% and 5.94%, respectively.

LME lead prices reached their highest levels since April 1997, attributed mostly to the continuing strength of speculative fund commodity buying. Consumer buying on the LME, however, remained largely absent, as a significant number of consumers, particularly in Europe, were still engaged in concluding 2004 contracts with lead producers. Only a small quantity of LME stocks remained in Europe, and LME stocks in the United States continued to decline. Expectations increased that the stock level would descend below 100,000 metric tons (t) by early in the first quarter of 2004. The availability of refined lead in the Western World showed signs of further tightening by the end of 2003, as estimates of Western World lead output were expected to decline by 150,000 t while Western World lead demand could decline by only 80,000 t. Asian lead demand remained strong, with 2003 annual figures expected to equal those of 2002. Further declines in Chinese exports of refined lead are likely in 2004, as Asian lead consumers continue to be faced with lower availability of lead and rising internal demand (CRU International Ltd., 2003).

The National Defense Stockpile (NDS) aggregated cash disposal (sale) of lead in November under the monthly Basic Ordering Agreement, DLA-Lead-005, was 3,500 t (3,858 short tons). In addition, 10, 647 t (11,736 short tons) were sold under a Long-Term Solicitation of Offers, DLA-Lead-004 (U.S. Defense National Stockpile Center, 2003). Sales of lead in the first 2 months of fiscal year 2004 (October 2003 through November 2003) totaled 14,487 t (15,969 short tons).

The U.S. Department of Health and Human Services (HHS) has included lead and lead compounds in its nominations proposed for listing in the Report on Carcinogens, Eleventh Edition. The Report on Carcinogens (previously known as the Annual Report on Carcinogens) is a Congressionally mandated listing of known human carcinogens and reasonably anticipated human carcinogens to which a significant number of persons residing in the United States are exposed. Its preparation is delegated to the National Toxicology Program (NTP) by the Secretary of HHS. Nominations for inclusion in the report were reviewed by three scientific committees, two composed of Federal agencies and interagency working groups, and one composed of peers, non-government reviewers that served as a board of scientific counselors to the NTP. The board of scientific counselors voted to reject the NTP staff recommendation to classify lead as a known human carcinogen. However, based on existing animal evidence, the counselors voted to classify lead and lead compounds as reasonably anticipated human carcinogens. This classification is defined as having limited evidence of carcinogenicity from studies in humans, which indicates that causal interpretation is credible, but that alternative explanations, such as chance, bias or confounding factors, could not adequately be excluded. Final public comments on the proposed listing were to be submitted to the NTP by January 6, 2004 (International Lead Zinc Research Organization, Inc., 2003; U.S. Department of Health and Human Services, 2003a).

HHS, through its Agency for Toxic Substances and Disease Registry (ATSDR), has issued notice of a revised priority list of hazardous substances that will be the subject of ATSDR toxicological profiles. Lead has been ranked second behind arsenic on the revised priority list. Revision of the priorities list is required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) as amended by the Superfund Amendments and Reauthorization Act. The list includes substances most commonly found at or near CERCLA hazardous waste sites that, based upon most recent information available, have been determined to be of greatest concern to public health (U.S. Department of Health and Human Services, 2003b).

The U.S. Department of Housing and Urban Development recently announced funding awards under four separate lead

programs administered by the agency. A total of about $75 million was awarded to 30 grantees under the fiscal year 2003 Lead-Based Paint Hazard Control Program. The purpose of this program is to assist States, Native American Tribes, and local governments in identifying and controlling lead-based paint hazards in eligible privately owned housing (U.S. Department of Housing and Urban Development, 2003b). Nearly $50 million also was distributed to 20 recipients under the fiscal year 2003 Lead Hazard Reduction Demonstration Program. The distribution of these funds is intended to assist local government units in carrying out specific programs pertaining to abatement, inspections, risk assessments, temporary relocations, and interim control of lead-based paint hazards. The awarded funds are to be directed toward eligible privately owned, single-family housing units and multifamily buildings occupied by low-income families (U.S. Department of Housing and Urban Development, 2003c). Another $5 million was distributed to eight grantees under the Healthy Homes and Lead Technical Studies Program (U.S. Department of Housing and Urban Development, 2003a). In addition, a total of about $2.5 million was awarded to six recipients under the Lead Outreach Program (U.S. Department of Housing and Urban Development, 2003d).

China's Yuguang Gold and Lead Group, Henan Province, plans to reduce its lead exports to between 60,000 t and 70,000 t in 2004, down by 30% to 40% compared with lead exports in 2003. A company spokesperson cited rising domestic prices and State implementation of lower export rebates, effective in 2004, as principal reasons for the action. Lead output at the Yuguang smelter-refinery was expected to be about 200,000 t in 2004, similar to the output in 2003 (Platts Metals Week, 2003b).

China's Jiyuan Gold Smelter, Henan Province, also reported an expected decline in refined lead exports in 2004, mainly because of lower export rebates. Jiyuan exported about 80,000 t of lead in 2003, primarily to Brazil, Japan, Korea, Malaysia, South Africa, and the United States. Production at the Jiyuan primary smelter-refinery is expected to reach full capacity of 200,000 metric tons per year (t/yr) in 2004, as a result of the completion of a 50,000-t/yr expansion project in April 2003 (Platts Metals Week, 2003a).

MCC Resources Development Co., Beijing, China, has accelerated its commitment in Pakistan, with plans to embark on a new lead-zinc project in Balochistan Province. MCC expects to mine the first ore at the Duddar underground lead-zinc mine by 2005, following a construction period of about 18 months. The company secured the mining rights to Duddar from the Pakistan Government in early November. The mine, situated in Kanraj Valley, is capable of yielding 32,500 t/yr of lead concentrate (54% lead), and 100,000 t/yr of zinc concentrate (65% zinc). It is expected to have a mine life of about 14 years (Metal Bulletin, 2003).

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TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES[1]

(Metric tons, lead content, unless otherwise specified)

	2002		2003		
	Year	January - November	October	November	January - November
Production:					
Mine (recoverable)	440,000	402,000	37,200	37,700	419,000
Primary refinery	262,000	NA	NA	NA	NA
Secondary refinery:					
Reported by smelters/refineries	1,100,000	995,000	99,300 r	91,500	1,020,000
Estimated	--	10,000	1,000 r	924	10,300
Recovered from copper-base scrap[e]	13,500	13,800	1,250	1,250	13,800
Total secondary	1,120,000	1,020,000	102,000 r	93,700	1,050,000
Stocks, end of period:					
Primary refineries	NA	NA	NA	NA	NA
Secondary smelters and consumers	105,000	85,200	79,700 r	86,300	86,300
Imports for consumption:					
Ore and concentrates	6	6	--	NA	6 [2]
Refined metal	210,000	195,000	11,300	NA	150,000 [2]
Consumption:					
Reported	1,440,000	1,400,000	116,000 r	109,000	1,220,000
Undistributed[e]	--	138,000	11,400 r	10,800	121,000
Total	1,440,000	1,540,000	127,000 r	120,000	1,350,000
Exports:					
Ore and concentrates	241,000	234,000	44,800	NA	237,000 [2]
Bullion	256	256	--	NA	585 [2]
Wrought and unwrought lead	43,200	33,000	5,480	NA	86,900 [2]
TEL/TML preparations, based on lead compounds	516	414	21	NA	483 [2]
Exports (gross weight): Scrap	106,000	97,700	9,140	NA	81,600 [2]
Platts Metals Week North American producer price (cents per pound)	43.56	43.64	43.98	44.08	43.71

[e]Estimated. [r]Revised. NA Not available. -- Zero.

[1]Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

[2]Includes data for January - October only; November data were not available at time of publication.

TABLE 2
MONTHLY AVERAGE LEAD PRICES

	North American producer price	LME		Sterling exchange rate
	cents/lb	$/metric ton	£/metric ton	dollars/£
2002:				
November	43.53	441.83	281.22	1.571116
December	43.54	443.22	279.41	1.586295
Year	43.56	452.29	301.96	1.503145
2003:				
September	43.78	520.90	322.44	1.615476
October	43.98	586.82	349.47	1.679164
November	44.08	621.71	367.93	1.689739

Source: Platts Metals Week.

TABLE 3
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP[1]

(Metric tons, gross weight)

Item	Stocks October 31, 2003	Net receipts	Consumption	Stocks November 30, 2003
Battery-lead	17,300 r	89,900	88,600	18,600
Soft lead	W	W	W	W
Drosses and residues	1,390 r	3,170	3,050	1,510
Other[2]	1,540	2,060	1,970	1,630
Total	20,200 r	95,100	93,600	21,800
Percent change from preceding month	XX	-21.0	-21.2	+7.6

rRevised. W Withheld to avoid disclosing company proprietary data; included with "Other." XX Not applicable.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes solder, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap not elsewhere classified.

TABLE 4
LEAD, TIN, AND ANTIMONY RECOVERED FROM LEAD-BASE SCRAP
IN NOVEMBER 2003[1]

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	67,500	--	--
Remelt lead	W	W	W
Antimonial lead	23,300	W	W
Other[2]	W	W	--
Total lead-base	91,500	44	354

W Withheld to avoid disclosing company proprietary data; included in "Total."
-- Zero.
[1]Data are rounded to no more than three significant digits.
[2]Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 5
CONSUMPTION OF LEAD IN THE UNITED STATES[1]

(Metric tons, lead content)

Uses	2002		2003		
	Year	January - November	October	November	January - November
Metal products:					
Ammunition, shot and bullets	57,600	38,000	3,080	2,300	33,000
Brass and bronze, billet and ingots	2,730	1,400	292	305	1,610
Cable covering, power and communication and calking lead, building construction	3,550	2,740	274	251	3,990
Casting metals	34,800	6,750	447	448	4,920
Sheet lead, pipes, traps and other extruded products	27,900	18,100	1,260	1,200	13,900
Solder	6,450	1,700	168	151	1,910
Storage batteries, including oxides	1,190,000	1,250,000	102,000	99,500	1,090,000
Terne metal, type metal, and other metal products[2]	24,600	1,030	5	5	73
Total metal products	1,350,000	1,320,000	108,000	104,000	1,150,000
Other oxides and miscellaneous uses	86,200	76,900	8,090 r	5,070	72,300
Total reported	1,440,000	1,400,000	116,000 r	109,000	1,220,000
Undistributed consumption[e]	--	138,000	11,400 r	10,800	121,000
Grand total	1,440,000	1,540,000	127,000 r	120,000	1,350,000

[e]Estimated. rRevised. -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes lead consumed in foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

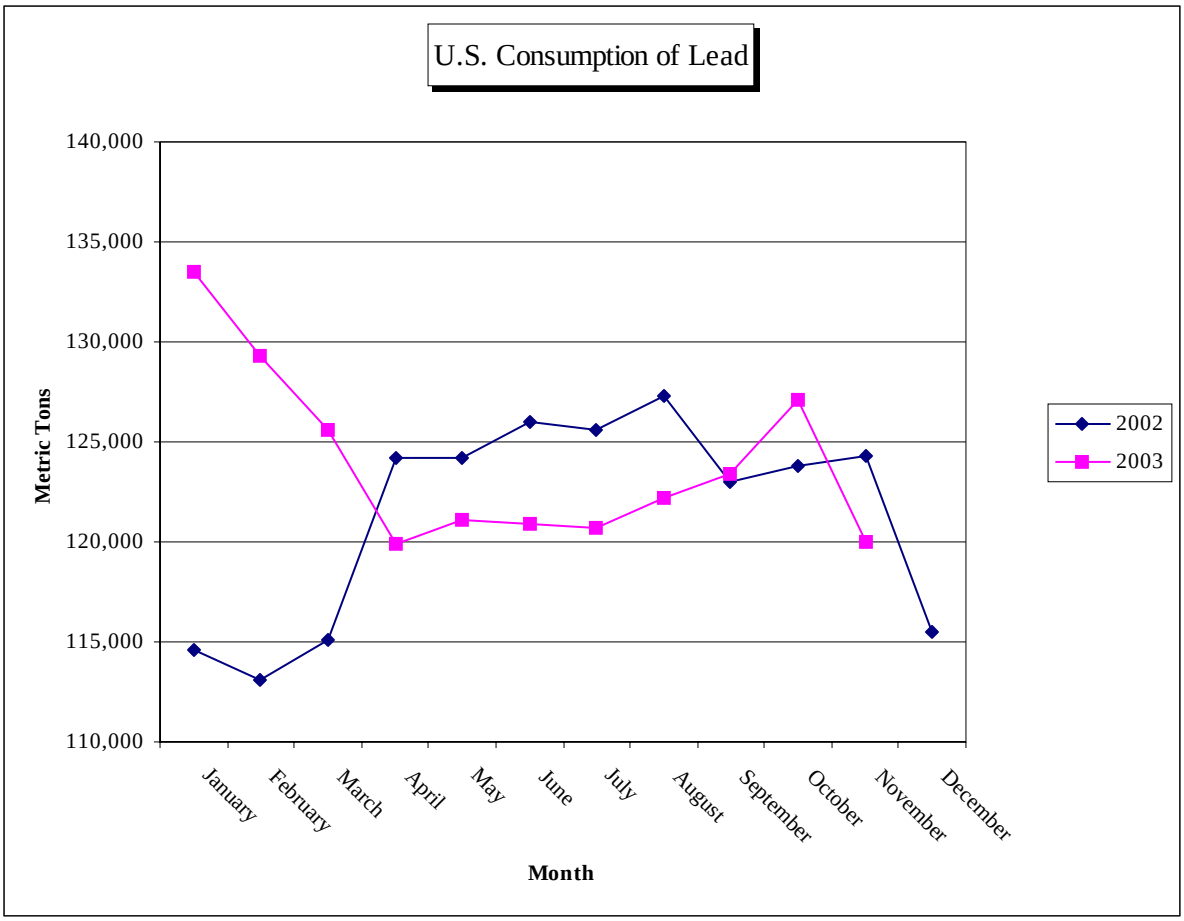

TABLE 6
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS,
AND CONSUMPTION OF LEAD[1]

(Metric tons, lead content)

Type of material	Stocks October 31, 2003	Net receipts	Consumption	Stocks November 30, 2003
Soft lead	39,200	65,400	62,500	42,100
Antimonial lead	28,800	26,300	25,100	29,900
Lead alloys	W	23,900	21,400	W
Copper-base scrap	W	58	70	W
Total	79,700 [r]	116,000	109,000	86,300

[r]Revised. W Withheld to avoid disclosing company proprietary data; included in "Total."
[1]Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 7
U.S. EXPORTS OF LEAD, BY CLASS[1]

(Metric tons)

	2002		2003		
	Year	October	September	October	January - October
Lead content:					
Ore and concentrates	241,000	19,200	43,600	44,800	237,000
Bullion	256	--	9	--	585
Materials excluding scrap	43,200	4,980	5,960	5,480	86,900
TEL/TML preparations, based on lead compounds	516	49	17	21	483
Total	285,000	24,300	49,600	50,300	325,000
Gross weight: Scrap	106,000	9,270	9,280	9,140	81,600

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 8
U.S. IMPORTS OF LEAD BY TYPE OF MATERIALS AND BY COUNTRY OF ORIGIN[1]

(Metric tons, lead content)

	General imports					Imports for consumption				
	2002		2003			2002		2003		
Country of origin	Year	January - October	September	October	January - October	Year	January - October	September	October	January - October
Ore, matte, etc.:										
China	3	3	--	--	--	3	3	--	--	--
United Kingdom	3	3	--	--	--	3	3	--	--	--
Total	6	6	--	--	--	6	6	--	--	--
Base bullion:										
Argentina	--	--	5	--	5	--	--	5	--	5
Germany	--	--	--	--	1	--	--	--	--	1
Total	--	--	5	--	6	--	--	5	--	6
Pigs and bars:										
Australia	43,700	32,600	--	--	10,100	2,630	2,630	--	31	31
Canada	172,000	142,000	10,300	10,800	142,000	172,000	142,000	10,300	10,800	142,000
China	28,200	28,200	--	--	1	28,200	28,200	--	--	1
Germany	185	185	--	--	--	185	185	--	--	--
Mexico	7,460	5,920	494	447	7,420	7,460	5,920	494	447	7,420
Other	246	245	11	--	127	94	93	11	--	127
Total	251,000	209,000	10,800	11,300	160,000	210,000	179,000	10,800	11,300	150,000
Reclaimed scrap, including ash and residues	--	--	--	--	--	--	--	--	--	--
Grand total	251,000	209,000	10,800	11,300	160,000	210,000	179,000	10,800	11,300	150,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.